

**California Cap-and-Trade Program and
Québec Cap-and-Trade System
August 2015 Joint Auction #4**

Summary Results Report

Background

The California Air Resources Board (ARB) and Québec's ministère du Développement durable, de l'Environnement et de la Lutte contre les changements climatiques (MDDELCC)¹ held the fourth joint auction of greenhouse gas (GHG) allowances on August 18, 2015. The auction included a Current Auction of 2015 vintage allowances and an Advance Auction of 2018 vintage allowances. The information provided in this report is a balance between the need for program transparency and protection of individual auction participants' market positions.

Prior to the certification of the auction, ARB and MDDELCC staff and the Market Monitor carefully evaluated the bids and determined that the auction process and procedures complied with the requirements of the California and Québec Cap-and-Trade Regulations. As provided below, the Market Monitor made the following determination:

The Market Monitor found that the auction was cleared consistent with the auction clearing rules in the regulations and appropriate economic logic. The Market Monitor confirmed the clearing price and clearing quantities by participant for the auction for 2015 vintage allowances and for the auction for 2018 vintage allowances. The auction algorithm correctly applied the regulation requirements covering the bid guarantee. The tie breaker logic was needed in this auction. The Market Monitor did not observe any breaches of security or communication protocols. The Market Monitor recommends that ARB and MDDELCC approve the August Auction results.

Auction proceeds figures are not shown in this report because of the exchange rate process for determining final auction proceeds in a joint auction. Winning bids are submitted in one of two currencies – U.S. dollars (USD) or Canadian dollars (CAD). After receiving payment from the winning bidders, and using instructions from the jurisdictions (California and Québec), the financial services administrator will exchange some amount of currency at then-prevailing market rates prior to transferring the auction proceeds to the jurisdictions.

Proceeds to the jurisdictions are paid after all bidder payments are received and will occur by September 14, 2015. As provided in the California Cap-and-Trade Regulation, sellers who consigned allowances in this auction will be paid the auction settlement

¹ Ministry of Sustainable Development, Environment and the Fight against Climate Change.

price in USD for every consigned allowance sold. Information regarding jurisdiction specific auction proceeds will be published after the auction is final.

California must receive auction proceeds only in USD and Québec must receive auction proceeds only in CAD. Thus, the total amount of auction proceeds received by California and by Québec from the sale of state- and province-owned allowances may vary (upwards or downwards) depending on the prevailing exchange rates in effect at the time of distribution of auction proceeds. Each jurisdiction will issue a Post Joint Auction Public Proceeds Report on September 14, 2015 providing the final amount of proceeds transferred.

**California Cap-and-Trade Program and
Québec Cap-and-Trade System
August 2015 Joint Auction #4**

The California Air Resources Board (ARB) and Québec's ministère du Développement durable, de l'Environnement et de la Lutte contre les changements climatiques (MDDELCC) held the fourth joint auction of GHG allowances on August 18, 2015. The auction included a Current Auction of 2015 vintage allowances and an Advance Auction of 2018 vintage allowances. The first table below provides key data and information on the results of the auction. The second table provides qualified bid summary statistics from the auction. Please see Explanatory Notes after the list of Qualified Bidders for descriptions of all summary information.

Auction Results

Summary Metric	Current Auction	Advance Auction
	2015 Vintage	2018 Vintage
Total Allowances Available for Sale	73,429,360	10,431,500
CA Entity Consignment	19,559,287	
ARB	42,698,426	8,957,500
MDDELCC	11,171,647	1,474,000
Total Allowances Sold at Auction	73,429,360	10,431,500
CA Entity Consignment	19,559,287	
ARB	42,698,426	8,957,500
MDDELCC	11,171,647	1,474,000
Total Qualified Bids Divided by Total Allowances Available for Sale	1.28	1.78
Proportion of Allowances Purchased by Compliance Entities	95.2%	93.6%
Herfindahl-Hirschman Index	597	1693

Qualified Bid Summary Statistics

All Qualified Bid Summary Statistics are determined in USD including all bids submitted in USD and CAD. The CAD equivalent of the USD Qualified Bid Summary Statistics is based on the Auction Exchange Rate. USD statistics are converted into CAD in whole cents to be able to compare statistics on a common basis.

Qualified Bid Price Summary Statistics	Current Vintage		2018 Vintage	
	USD	CAD	USD	CAD
Auction Reserve Price	\$12.10	\$15.84	\$12.10	\$15.84
Settlement Price	\$12.52	\$16.39	\$12.30	\$16.10
Maximum Price	\$45.21	\$59.18	\$18.57	\$24.31
Minimum Price	\$12.10	\$15.84	\$12.10	\$15.84
Mean Price	\$13.73	\$17.98	\$12.54	\$16.42
Median Price	\$12.56	\$16.44	\$12.71	\$16.64
Median Allowance Price	\$12.70	\$16.63	\$12.36	\$16.18
Auction Exchange Rate (USD to CAD)				1.3091

List of Qualified Bidders for the Current Auction of 2015 Vintage Allowances and the Advance Auction of 2018 Vintage Allowances

A Qualified Bidder is an entity that completed an auction application or confirmed an intent to bid for the auction, submitted an acceptable bid guarantee, and was approved by ARB or MDDELCC to participate in the auction.

Aera Energy, LLC
AltaGas Power Holdings (U.S.), Inc.
Bell-Gaz Itée
BNSF Railway Company
BP Products North America Inc.
California Department of Water Resources
California Resources Elk Hills, LLC
Calpine Energy Services, L.P.
Cargill Power Markets, LLC
CGC, Inc.
Chevron U.S.A., Inc.
City of Anaheim, Public Utilities Department
City of Cerritos
City of Palo Alto
City of Roseville
City of Shasta Lake
City of Vernon, Vernon Gas & Electric
ClimeCo Corporation
CP Energy Marketing (US), Inc.
EDF Trading North America, LLC
Énergie Valero Inc.
Exelon Generation Company, LLC
Exxon Mobil Corporation
Flyers Energy, LLC
Freeport-McMoRan Oil & Gas, LLC
Gazifère, Inc.
Gestion Énergie Québec, Inc.
High Desert Power Project, LLC
Hydro-Québec
Idemitsu Apollo
IPC (USA), Inc.
Jaco Oil Company
Kern Oil & Refining Co.
KES Kingsburg, L.P.
La Coop Carbone

Lafarge Canada, Inc.
Les Pétroles Irving Commercial s.e.n.c
Les Pétroles Irving Marketing s.e.n.c.
Les Produits Pétroliers Norcan S.E.N.C
Liberty Utilities (CalPeco Electric), LLC
Los Angeles Department of Water & Power
Luminus Energy Partners, LLC
Macquarie Energy, LLC
Modesto Irrigation District
Morgan Stanley Capital Group, Inc.
Morgan Stanley Capital Group, Inc.
NextEra Energy Power Marketing, LLC
NGL Supply Co Ltd
Northern California Power Agency
NRG Power Marketing, LLC
Pacific Gas and Electric Company
PacifiCorp
Petro Diamond Incorporated
Pétrolière Impériale
Phillips 66 Company
Pittsburg Power Company
Plumas-Sierra Rural Electric Cooperative
Portland General Electric Company
Pro Petroleum, Inc.
Produits Suncor Énergie S.E.N.C.
River City Petroleum
Robinson Oil Supply & Transport, Inc
Royal Bank of Canada
Sacramento Municipal Utility District (SMUD)
San Diego Gas & Electric Company
San Diego Gas & Electric Company
San Diego Gas and Electric Company
San Joaquin Refining Company, Inc.
Sempra Generation
Seneca Resources Corporation
Shell Energy North America (US), L.P.
Shiralian Enterprises
Signal Hill Petroleum, Inc.
Silicon Valley Power (SVP), City of Santa Clara
Société en commandite Gaz Métro
Société en commandite Revenu Noranda

Southern California Edison Company
Southern California Gas Company
Southwest Gas Corporation
Statkraft US, LLC
Surprise Valley Electrification Corp.
Tesoro Refining & Marketing Company, LLC
TransAlta Energy Marketing (U.S.), Inc.
TransCanada PipeLines Limited
Turlock Irrigation District
Union Pacific Railroad Company
Vitol, Inc.
Walnut Creek Energy, LLC

Explanatory Notes: Qualified Bid Summary Statistics Current Auction of 2015 Vintage Allowances

Total Allowances Available for Sale:	Total allowances available, by vintage, for purchase in the Current Auction in metric tons, including allowances consigned by consigning entities and allowances sold by the State of California and the Province of Québec.
Total Allowances Sold at Auction:	Total allowances, by vintage, purchased in the Current Auction in metric tons.
Total Qualified Bids Divided by Total Allowances Available for Sale:	Total number of allowances (all vintages) included in all the qualified bids for the Current Auction allowances (regardless of bid price) divided by the total number of Current Auction allowances available in the auction.
Proportion of Allowances Purchased by Compliance Entities:	The total number of Current Auction allowances (by vintage) purchased in the Current Auction by compliance entities divided by the total number of Current Auction allowances sold in the Current Auction. A Compliance Entity is a Covered Entity or Opt-in Covered Entity as defined in the Cap-and-Trade Regulation or an Emitter as defined in Québec's Cap-and-Trade Regulation.
Herfindahl–Hirschman Index (HHI):	The HHI is a measure of the concentration of allowances purchased by winning bidders relative to the total sale of current auction allowances (regardless of vintage) in the auction. The percentage of allowances purchased by each winning bidder is squared and then summed across all winning bidders. The HHI can range up to 10,000, representing 100% of the current vintage allowances purchased by a single bidder (i.e., $100 \times 100 = 10,000$).
Qualified Bid Price Summary Statistics:	Statistics are calculated from all the qualified bids for the Current Auction

	allowances (regardless of bid price). All price statistics are shown in USD and CAD.
Auction Reserve Price:	The minimum acceptable auction bid price for Current Auction allowances shown in both USD and CAD per metric ton.
Settlement Price:	The Current Auction allowance price that resulted from the auction, in USD and CAD per metric ton.
Maximum Price:	Highest qualified bid
Minimum Price:	Lowest qualified bid
Mean Price:	Average qualified bid calculated as the sum of the bid price times the bid quantity of each qualified bid divided by the sum of the bid quantities across all qualified bids.
Median Price:	The price per metric ton calculated so that 50% of the qualified bids fall above and below the median bid price.
Median Allowance Price:	The price per metric ton calculated so that 50% of the quantity of allowances in the qualified bids fall above and below that price median value.
Auction Exchange Rate (USD to CAD):	The most recently available noon daily buying rate for USD and CAD as published by the Bank of Canada the day before the auction.

Advance Auction of 2018 Vintage Allowances

The data for future vintage allowances available for sale at the Advance Auction are computed in the same manner as computed for the Current Auction. No allowances are consigned to the Advance Auction.